

AMENDMENTS TO THE SPECIFICATION

Paragraph starting at line 4 of page 16 is amended as follows:

Brachytherapy is carried out ~~with an injection device~~ with a needle to inject a radioactive seed into a patient's body. A space-fixed detector detects radiation from radiation emitters ~~affixed to the injection device~~ to determine the position of a deposited seed from the needle with reference to a space-fixed coordinate system. Markers may be affixed to the patient's body such that a body-fixed coordinate system can be determined in real time by an imaging device. Alternatively, earlier obtained patient's anatomical data ~~stored in a computer~~ may be referenced. After positions of ~~the seeds which have been injected~~ earlier injected seeds are thus ascertained in real time ~~with reference to a~~ in the body-fixed coordinate system, the stored anatomical data may be updated and a radiation dose distribution can be calculated ~~on the basis of~~ from the determined seed positions. The calculated radiation dose distribution can be displayed ~~for a visual inspection~~ and ~~may be~~ compared with a planned distribution such that ~~the injection device can be robotically controlled to deposit the next seed at a desired position inside the patient's body for bringing about the planned distribution most effectively.~~